

# Ka-Band PAA for Satellite Telemetry System for RLVs & Aircraft, Phase I

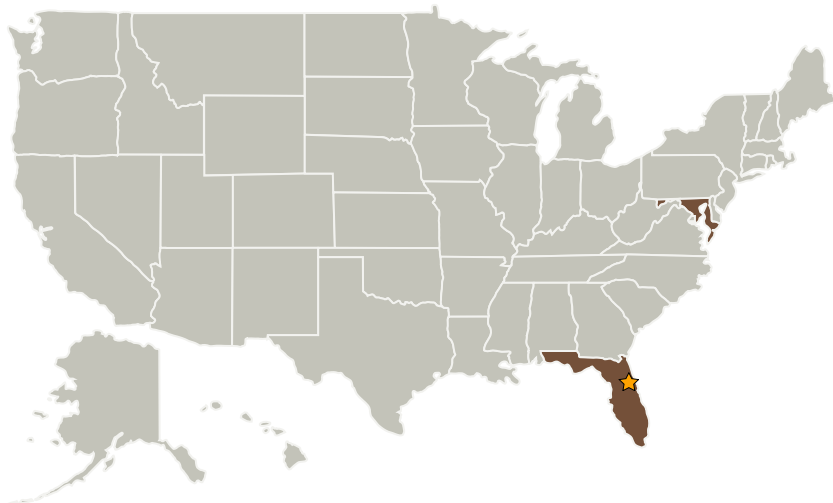
Completed Technology Project (2003 - 2003)



## Project Introduction

The proposed antenna is a Radial-Waveguide Array (RWA) that will operate at Ka band, 25.5-27.5 GHz in transmit and receive for left-hand, right-hand. This Phase I effort will develop the phase shifter element and control distribution layer. This planar antenna has the ability to reconfigure its beam width from a narrow, directive beam to a sector-wide beam. The design is easily scaleable to support the desired gain for the specific link. The design and the Parascan? phase shifter technology that makes this antenna possible are unique to Paratek Microwave, Inc. This antenna will enable NASA to realize a space-based telemetry system for their reusable launch vehicles, with substantial savings from their terrestrial-based telemetry systems and revolutionize broadband network links for both terrestrial and SATCOM communication networks.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Paratek Microwave, Inc.	Supporting Organization	Industry	Columbia, Maryland



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Kennedy Space Center (KSC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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## Primary U.S. Work Locations

Florida

Maryland

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

Carlos Torrez

### Project Manager:

Frederick M Mckenzie

### Principal Investigator:

Jeff Henderson

## Technology Areas

### Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - └ TX05.2 Radio Frequency
    - └ TX05.2.6 Innovative Antennas